REMARKS/ARGUMENTS

Claims 1-12 and 14 were previously pending in the application. Claims 2-8 and 11 are amended, and claim 14 is cancelled herein. Assuming entry of this amendment, claims 1-12 are now pending in the application. The Applicant hereby requests further examination and reconsideration of the application in view of the foregoing amendments and these remarks.

In paragraph 1 of the action, the Examiner objected to claims 2-8 and 11 as reciting "the invention." The Applicant has amended claims 2-8 and 11 to change "the invention" to --the method--, and these amendments are believed to overcome the objections to claims 2-8 and 11.

In paragraph 2 of the action, the Examiner rejected claim 12 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent App. No. 2003/0125039 ("Lachtar") in view of U.S. Patent No. 6,069,871 ("Sharma"). In paragraph 3, the Examiner rejected claim 14 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent App. No. 2003/0072282 ("Liang") in view of U.S. Patent App. No. 2002/0119784 ("Agin") and further in view of U.S. Patent No. 6,748,222 ("Hashem").

Claim 12

Claim 12, as amended, recites that "the call-context amount per CPU load-balancing algorithm comprises:

determining an average number of calls per processor;

weighting the average number of calls per processor by a total call capacity of the processor; and

selecting the processor with the smallest weighted call average."

As explained in the specification, this algorithm "determines the average number of calls per CPU (= total calls / CPUs), and this average number is weighted by the total call capacity of the CPU. The CPU with the least weighted calls is then selected. Because the number of calls in the system is high (several thousand), the system load imposed by the calls averages out" (p. 7, lines 20-24).

The Examiner continues to allege that Lachtar and Sharma somehow disclose determining an average number of calls per processor and weighting the average number of calls per process or by a total call capacity of the processor, citing to paragraphs [0031], [0032], and [0041] of Lachtar, which read as follows:

> [0031] Referring first to FIG. 8A, operation commences at step 802 wherein a BSC has received a request for radio link resources from an MSC for a specific CDMA cell. Such request is sent by the MSC in attempting to complete a call that was either initiated by a mobile unit or that is to be terminated to a mobile unit. Then, at step 804, the BSC serving the specific CDMA cell sends capacity estimate requests to all BTS's associated with the cell and starts a timer.
>
> [0032] The queried BTS's determine and provide their respective net excess capacity NEC to the BSC. The queried BTS's may also optionally provide a stored net excess capacity threshold NEC_t, if desired. A suitable method for determining NEC is set forth, for example, in commonly owned U.S. Pat. No. 6,069,871, previously referenced which is incorporated herein by reference.
>
> [0041] If step 816 results in an affirmative response, operations proceed to step 844, where a determination is made whether there is any responding BTS where the net excess capacity exceeds the net excess capacity threshold NEC_t. If so, operations proceed to step 846 where the

BTS having a net excess capacity greater than the net excess capacity threshold is selected for the highest priority frequency where that condition is met. If more than one carrier frequency meets this condition, the carrier with the highest net excess capacity is selected. Operations proceed to step 848 where the requested radio link resources are then set up on the selected BTS and the procedure ended.

As can plainly be seen, none of the foregoing portions of Lachtar even mentions the determination of an average number of calls per processor, let alone weighting the average number of calls per processor by a total call capacity of the processor. In this rejection, the Examiner also cites to col. 8, lines 9-59 of Sharma, which reads as follows:

MCTA--Multi-Carrier Traffic Allocation

BSC--Base Station Controller

BTS--BaseStation Transceiver Subsystem

MSC--Mobile Switching Center

EFC--Excess Forward Link Capacity=(Maximum Allowable Forward Link Power--Current Forward Link Power)

$(EFC)_{bl}$ --Excess Forward Link Capacity Blocking Threshold. The call is blocked if EFC falls below $(EFC)_{bl}$.

ERC--Excess Reverse Link Capacity=(Thermal Noise Floor at the Base Station/Total Receive Power at the Base Station)

$(ERC)_{bl}$ --Excess Reverse Link Capacity Blocking Threshold. The call is blocked if ERC falls below $(ERC)_{bl}$.

ECE--Excess Number of Channel Elements.

$(ECE)_{bl}$ --Excess Channel Element Blocking Threshold. The call is blocked if ECE falls below $(ECE)_{bl}$.

EWC--Excess Number of Walsh Codes

$(EWC)_{bl}$ --Excess Walsh Code Blocking Threshold. The call is blocked if EWC falls below $(EWC)_{bl}$.

NEC--Net Excess Capacity. This is the maximum excess capacity of a BTS. It is calculated by taking into account EFC, ERC, $(EFC)_{bl}$, $(ERC)_{bl}$, ECE and EWC as follows:

First, translate ERC and EFC into number of additional radio links possible.

M=Number of current users served by the sector (cell).

N_r =Number of additional links possible before reverse link blocking is encountered=(N_{pole} (1-$(ERC)_{bl}$)-M) where N_{pole} =M/(1-ERC)

N_f=Number of additional links possible before forward link blocking is encountered=(EFC-$(EFC)_{bl}$)/P_{avg} where P_{avg} is the average power per user.

P_{avg} =(current total traffic channel transmit power/M)

N_c =Number of additional links possible before number of channel elements are exhausted=ECE

N_w =Number of additional links possible before number of walsh codes are exhausted=EWC

The maximum net excess capacity is limited by the minimum value of N_r, N_f, N_c and N_w. For example even if N_r, N_f and N_w are high but no channel elements are available i.e. N_c =0, the net excess capacity would be zero.

NEC=min (N_r, N_f, N_c, N_w)

(NEC) --Net Excess Capacity Threshold. This is the value above which the frequency is considered to be lightly loaded.

Just as with the Examiner's citations to Lachtar, none of the foregoing portion of Sharma even mentions the determination of an average number of calls per processor, let alone weighting the average number of calls per processor by a total call capacity of a processor.

According to the definitions set forth in col. 8, lines 34-59 of Sharma, reproduced above, Net Excess Capacity (NEC) in Sharma is defined as taking into account EFC, ERC, $(EFC)_{bt}$, $(ERC)_{bt}$, ECE, and EWC – all of which represent excess amounts of various resources. The only other variables involved in calculating NEC, according to Sharma, are the number of current users serviced by the cell, i.e., M, the numbers of additional links possible before encountering various conditions, i.e., N_r, N_f, N_c, N_w, and average power P_{avg}.

None of these variables defines any kind of **AVERAGE** number of calls at all – no average number of calls per BTS, and certainly no "average number of calls per processor," as required by claim 12. The only number of calls mentioned in Sharma's calculations is M, which represents the number of current users served by the sector or cell. This is not an average number.

None of these variables defines any kind of **WEIGHTING** or **WEIGHTED AVERAGE** at all – and certainly no "weighted average number of calls per processor," as required by claim 12. Indeed, Sharma's calculations are clearly defined as being "used in one particular embodiment to determine excess capacity for a particular BTS [Base Station Transceiver Subsystem]." Sharma is not concerned with weighting an average number of calls over multiple processors, because Sharma's calculations are only for a single sector or cell at a time.

Since Sharma's calculations do not involve any averaging at all, Sharma cannot possibly disclose a step of "selecting the processor with the smallest weighted call average," as required by claim 12. The Examiner claims that "the highest NEC value means it has the most capacity and therefore it would have the smallest weighted call average." This is completely untrue. The highest NEC value, according to Sharma, does indeed refer to a BTS with the most excess capacity. However, having the most excess capacity is not the same thing as having the smallest weighted call average. This is demonstrated by the following simplified hypothetical example, which includes four BTSs having varying call capacities:

	BTS 1	BTS 2	BTS 3	BTS 4
Capacity (no. of calls)	11	10	5	7
No. of calls in progress	11	2	5	4
NEC (no. of calls)	0	8	0	3

In the above example, BTS 2 has the capacity to handle 10 calls and is only handling 2 calls, resulting in a NEC of 8 calls. Therefore, according to Sharma, the BTS with the most excess capacity would be BTS 2. However, the calculation for the smallest weighted call average is quite different and, consequently, provides a different result. As explained in the Applicant's specification at p. 7, lines 21-22, the average number of calls per processor (i.e., the total number of calls in the system divided by the total number of processors) is weighted by the total call capacity of a given processor to arrive at that processor's weighted call average. In this example, the average number of calls per BTS is 5.5 (i.e., 22 calls total, divided by 4 BTSs). The weighted call average of BTS 1 is 1.83 (i.e., 5.5 average calls per BTS, multiplied by BTS 1's capacity of 11 calls, divided by a total system capacity of 33 calls), the weighted call average of BTS 2 is 1.67 (i.e., 5.5 average calls per BTS, multiplied by BTS 2's capacity of 10 calls, divided by a total system capacity of 33 calls), the weighted call average of BTS 3 is 0.83 (i.e., 5.5 average calls per BTS, multiplied by BTS 3's capacity of 5 calls, divided by a total system capacity of 33 calls), and the weighted call average of BTS 4 is 1.17 (i.e., 5.5 average calls per BTS, multiplied by BTS 4's capacity of 7 calls, divided by a total system capacity of 33). Therefore, according to the Applicant's

claim 12, the BTS having the smallest weighted call average would be BTS 3. This is clearly not the same BTS as the BTS with the most excess capacity according to Sharma, which is BTS 2.

Therefore, Sharma does not teach, disclose, or even suggest a step of "selecting the processor with the smallest weighted call average," as required by claim 12.

Lachtar also fails to supply any of the missing teachings of claim 12, namely:

determining an average number of calls per processor;

weighting the average number of calls per processor by a total call capacity of the processor; and

selecting the processor with the smallest weighted call average.

The Applicant submits therefore that no combination of the cited references can render obvious claim 12.

Claim 14 has been cancelled herein, thereby rendering moot the obviousness rejection of this claim.

The Applicant submits therefore that the rejections of claims under Section 103 have been overcome.

Claims 1-11 have been indicated as allowable over the art. However, in view of the foregoing argument, the Applicant believes that all of pending claims 1-12 are allowable over the art.

In view of the above amendments and remarks, the Applicant believes that the now-pending claims are in condition for allowance. Therefore, the Applicant believes that the entire application is now in condition for allowance, and early and favorable action is respectfully solicited.

COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE

On page 6 of the action, the Examiner provides a Statement of Reasons for Allowance (the "Statement").

The Statement appears to refer to the subject matter of independent claim 9. The Applicant submits that the application also has independent claims 1 and 10 to whose subject matter the Examiner appears not to refer. To that extent, the Applicant objects to the Statement.

In general, to the extent that the Statement differs from the language of any of the independent claims, the Applicant rejects any narrowing or limitations that might possibly result from such differences.

For each of these reasons individually and for all these reasons collectively, the Applicant objects to the Statement.

Respectfully submitted,

Date: 1/26/07

Customer No. 46850
Mendelsohn & Associates, P.C.
1500 John F. Kennedy Blvd., Suite 405
Philadelphia, Pennsylvania 19102

Kevin M. Drucker
Registration No. 47,537
Attorney for Applicant
(215) 557-6659 (phone)
(215) 557-8477 (fax)